

Serial No. 09/781,483  
Page 2 of 19

## IN THE CLAIMS

Please consider the claims as follows:

1. (Original) A data structure, comprising:  
a plurality of logically linked applets, each of said applets defining a graphical layer, a video layer and a control layer, said control layer of each respective applet logically linking a graphical layer object to another applet.
2. (Original) The data structure of claim 1, wherein said graphical layer comprises a plurality of graphical objects, each of said graphical objects being logically linked to a respective applet via said control layer.
3. (Original) The data structure of claim 1, wherein:  
said linked applets are stored in provider equipment within an interactive information distribution system and executed within subscriber equipment within said interactive information distribution system;  
said subscriber equipment generating in response thereto an image representative signal which, when processed by a display device, results in the display of:  
said graphics layer, for displaying one or more graphical objects, said graphical objects being associated with respective applets stored in provider equipment, said applets comprising menu information and associated image information;  
said video layer, for displaying still or moving images, including still or moving images generated using said applet image information; and  
said control layer, coupled to said graphics layer and said video layer, for generating an applet request in response to a selection of a graphical object.
4. (Original) In an interactive information distribution system comprising provider equipment and subscriber equipment in communication via a network, a method comprising:

315694-1

Serial No. 09/781,483

Page 3 of 19

transmitting, to said subscriber equipment from said provider equipment, a first applet defining a graphical layer, a video layer and a control layer, said control layer logically linking a graphical layer object to a second applet stored in said provider equipment; and

in response to subscriber interaction indicative of the selection of said graphical layer object, transmitting said second applet to said subscriber.

5. (Original) The method of claim 4, wherein said subscriber equipment receives and processes a single applet to provide, upon a display device, a graphical layer and a video layer, said control layer being responsive to user manipulation of graphical objects to select for download to said subscriber an applet associated with a selected graphical object.

6. (Original) The method of claim 4, wherein:

said graphical layer includes at least one graphical object representative of said logically linked applets, said video layer provides a contextual anchor relating to said applets and said control layer operates to logically link said graphical objects to said other applets.

7. (Previously presented) A guide page comprising:

a video layer forming background video of said guide page and comprising a plurality of title objects, wherein the video layer is derived from a video stream received from a transmission source;

a graphics layer comprising a plurality of overlay objects selectively overlaying said video layer, wherein each of the overlay objects is associated with a respective title object in the video layer and is selectively controlled to visually emphasize or de-emphasize a title object in the video layer of said guide page; and

a control layer for controlling generation of the video and graphics layers, said video, graphics, and control layers being defined by an applet originating at said transmission source, and said overlay objects of said graphics layer being logically associated with another applet at said transmission source.

315694-1

Serial No. 09/781,483  
Page 4 of 19

8. (Original) The guide page of claim 7, wherein an opacity level of each overlay object is adjustable to visually emphasize or de-emphasize the associated title object.
9. (Original) The guide page of claim 7, wherein a color of each overlay object is adjustable to visually emphasize or de-emphasize the associated title object.
10. (Original) The guide page of claim 7, wherein de-emphasized title objects are substantially hidden from view.
11. (Original) The guide page of claim 7, wherein the overlay objects are selectively controlled to hide or reveal the associated title objects.
12. (Original) The guide page of claim 7, wherein emphasized title objects are depicted as high intensity objects on the guide page and de-emphasized title objects are depicted as low intensity objects.
13. (Original) The guide page of claim 7, wherein an amount of de-emphasize for each title object is adjustable in discrete increments.
14. (Original) The guide page of claim 7, wherein at least one of the overlay objects in the graphics layer is a transparent overlay that does not visually alter the associated title object.
15. (Original) The guide page of claim 7, wherein each overlay object in the graphics layer is implemented as a bar having a particular shape.
16. (Original) The guide page of claim 7, wherein each overlay object in the graphics layer is implemented as horizontal bar.
17. (Original) The guide page of claim 7, wherein each overlay object is associated with a particular x-y coordinate.

315694-1

Serial No. 09/781,483

Page 5 of 19

18. (Original) The guide page of claim 7, wherein each title object in the video layer represents a program in a listing of programs.
19. (Original) The guide page of claim 18, wherein the listing of programs includes prior, current, or future time programming, or a combination thereof.
20. (Original) The guide page of claim 7, wherein each title object is associated with a respective program for a particular channel and time slot.
21. (Original) The guide page of claim 20, wherein title objects not associated with a desired time slot are masked by controlling the associated overlay objects.
22. (Original) The guide page of claim 7, wherein each title object corresponds to a manipulable object within the video layer.
23. (Original) The guide page of claim 7, wherein the title objects in the video layer are visually emphasized or de-emphasized in response to user manipulations via a remote control unit.
24. (Original) The guide page of claim 7, wherein the overlay objects in the graphics layer are controlled locally at a set top terminal.
25. (Original) The guide page of claim 7, wherein the graphics layer is modified in response to a user command.
26. (Original) The guide page of claim 7, wherein the graphics layer is derived based in part on data received from the transmission source.
27. (Original) The guide page of claim 7, wherein the graphics layer is generated at the transmission source and received via one or more streams.

Serial No. 09/781,483  
Page 6 of 19

28. (Original) The guide page of claim 7, wherein the overlay objects are arranged in the graphics layer based on overlay parameters received from the transmission source.

29. (Original) The guide page of claim 7, wherein the graphics layer is generated locally at a set top terminal.

30. (Original) The guide page of claim 7, wherein the graphics layer is generated using one or more bitmaps.

31 (Original) The guide page of claim 30, wherein the one or more bitmaps are pre-programmed at a set top terminal.

32. (Original) The guide page of claim 30, wherein the one or more bitmaps are updatable at a set top terminal.

33. (Original) The guide page of claim 30, wherein the one or more bitmaps are synchronized to the video layer via signaling sent via a data delivery means.

34. (Original) The guide page of claim 7, wherein the graphics layer includes an icon representative of a particular channel selected for processing.

35. (Original) The guide page of claim 7, wherein an emphasized title object can be selected to retrieve a video stream or an audio stream, or both, associated with the emphasized title object.

36. (Original) The guide page of claim 7, wherein an emphasized title object can be selected to change a level of abstraction, wherein each of a plurality of possible levels of abstraction defines a particular manner in which data is presented on the program guide page.

Serial No. 09/781,483

Page 7 of 19

37. (Original) The guide page of claim 36, wherein the plurality of levels of abstraction include an interaction model that includes manipulations requiring no interaction with the transmission source.
38. (Original) The guide page of claim 36, wherein the plurality of levels of abstraction include an interface model that includes manipulations requiring interaction with the transmission source.
39. (Original) The guide page of claim 36, wherein the plurality of levels of abstraction include a contextual level indicative of replacement of the video layer in response to a user command.
40. (Previously presented) An interactive program guide (IPG) page comprising:  
a video layer comprising a plurality of title objects, wherein each title object is associated with a particular channel and time slot, and wherein the video layer is derived from a video stream received from a service provider transmission source;  
a graphics layer comprising a plurality of overlay objects selectively overlaying said video layer, wherein each overlay object is associated with a respective title object in the video layer and is selectively controlled to hide or reveal the associated title object; and  
a control layer for controlling generation of the video and graphics layers, said video, graphics, and control layers being defined by an applet originating at said transmission source, and said overlay objects of said graphics layer being logically associated with another applet at said transmission source.
41. (Original) The IPG page of claim 40, wherein the video layer includes title objects for a plurality of time slots, and wherein title objects corresponding to a selected time slot are revealed and title objects corresponding to remaining time slots are hidden from view.

Serial No. 09/781,483  
Page 8 of 19

42. (Original) The IPG page of claim 40, wherein the video layer is divided into a plurality of regions including a guide region and a video region.

43. (Original) The IPG page of claim 42, wherein the plurality of regions further includes a program description region used to display program information for a particular program.

44. (Original) The IPG page of claim 42, wherein the guide region presents a listing of programs and is generated at the transmission source.

45. (Previously presented) An interactive program guide (IPG) page comprising:  
a video layer comprising a guide region and a video region, wherein the guide region includes a plurality of title objects, and wherein each title object is associated with a particular channel and time slot;  
a graphics layer comprising a plurality of overlay objects selectively overlaying said video layer, wherein each overlay object is associated with a respective title object in the video layer and is selectively controlled to emphasize or de-emphasize the associated title object shown in the IPG page; and  
a control layer for controlling generation of the video and graphics layers, said video, graphics, and control layers being defined by an applet originating at a transmission source, and said overlay objects of said graphics layer being logically associated with another applet at said transmission source.

46. (Original) The IPG page of claim 45, wherein the video layer further includes a plurality of icons representative of a plurality of user selectable options.

47. (Original) The IPG page of claim 45, wherein the video layer further includes a program description region.

Serial No. 09/781,483  
Page 9 of 19

48. (Original) The IPG page of claim 45, wherein a first set of one or more title objects in the guide region is emphasized and a second set of one or more title objects in the guide region is de-emphasized.

49. (Original) The IPG page of claim 45, wherein the title objects in the guide region and the overlay objects in the graphics layer are generated at a transmission source.

50. (Original) The IPG page of claim 45, wherein the title objects in the guide region are generated at a transmission source and the overlay objects in the graphics layer are generated locally at a set top terminal.

51. (Previously presented) A method for providing an interactive program guide (IPG) page at a set top terminal, the method comprising:

- receiving a video stream comprising a control layer and a video layer defined by an applet originating from a transmission source;

- executing the received control layer for controlling presentation of said video layer and a graphics layer;

- processing the received video stream to provide a video layer for the IPG page, wherein the video layer includes a plurality of title objects, and wherein each title object is associated with a respective channel and time slot;

- presenting said graphics layer having included therein a plurality of overlay objects displayed over said video layer, wherein each overlay object is associated with a respective title object in the video layer and is selectively controlled to visually emphasize or de-emphasize the associated title object; and

- associating a selected overlay object of said graphics layer to another applet at said transmission source.

52. (Original) The method of claim 51, further comprising:  
merging the video layer with the graphics layer to provide an output video.



Serial No. 09/781,483  
Page 10 of 19

53. (Original) The method of claim 51, wherein the video and graphics layers are generated at the transmission source.
54. (Original) The method of claim 51, wherein the video layer is generated at the transmission source and the graphics layer is generated locally at the set top terminal.
55. (Original) The method of claim 51, further comprising:  
receiving a user command to change emphasis on one or more title objects; and  
modifying the graphics layer in response to the user command.
56. (Original) The method of claim 51, further comprising:  
receiving a user command selecting a particular title object; and  
processing a stream associated with the particular title object to retrieve selected information.
57. (Original) The method of claim 51, further comprising:  
receiving a command to change a level of abstraction; and  
changing the level of abstraction in response to the received command, and  
wherein each of a plurality of possible levels of abstraction defines a particular manner in which data is presented on the IPG page.
58. (Previously presented) A method for providing a guide page at a set top terminal, the method comprising:  
receiving a first stream comprising a control layer and a video layer defined by an applet originating from a transmission source;  
executing the received control layer for controlling presentation of said video layer and a graphics layer;  
processing the first stream to provide said video layer for the guide page,  
wherein the video layer includes a plurality of title objects;  
receiving a second stream from the transmission source;

315694-1

Serial No. 09/781,483  
Page 11 of 19

processing the second stream to provide said graphics layer for the guide page, wherein the graphics layer includes therein a plurality of overlay objects that are displayed over said video layer, and wherein each overlay object is associated with a respective title object in the video layer and is selectively controlled to visually emphasize or de-emphasize the associated title object; and  
associating a selected overlay object of said graphics layer to another applet at said transmission source.

59. (Original) The method of claim 58, further comprising:  
receiving a user command to emphasize or de-emphasize a particular title object; and  
modifying the graphics layer in response to the user command.

60. (Original) The method of claim 59, wherein the modifying is performed locally at a receiving device.

61. (Original) The method of claim 58, further comprising:  
receiving a user command for a particular selection; and  
sending a request to the transmission source for additional data if the user request cannot be processed based on available data at a set top terminal.

62. (Previously presented) A set top terminal (STT) operative to provide an interactive program guide (IPG) page, comprising:  
a demodulator operative to receive a modulated signal including a control layer and a video layer of the IPG page, and provide a transport stream;  
a transport de-multiplexer coupled to the demodulator and operative to receive and process the transport stream to provide a plurality of elementary streams;  
a video decoder coupled to the transport de-multiplexer and operative to decode a first elementary stream to provide the video layer for the IPG page, wherein the video layer includes a plurality of title objects, and wherein each title object is associated with a respective channel and time slot in a program guide listing;

Serial No. 09/781,483  
Page 12 of 19

an on-screen display (OSD) processor operative to provide a graphics layer having included therein a plurality of overlay objects for display over said video layer, wherein each overlay object is associated with a respective title object in the video layer and is selectively controlled to visually emphasize or de-emphasize the associated title object;

a controller coupled to said video decoder and the OSD processor, and operative to process said control layer to define presentation of the video layer and the graphics layer displayed over the video layer, said video, graphics, and control layers being defined by an applet originating at a transmission source, and said overlay objects of said graphics layer being logically associated with another applet at said transmission source; and

a compositor coupled to the video decoder and the OSD processor and operative to combine the video layer with the graphics layer to provide the IPG page.

63. Canceled.

64. (Currently amended) The STT of claim ~~63~~62, wherein the controller is operative to receive a user command and, in response, modifies a signal provided to the OSD processor to change presentation of an overlay object.

65. (Original) The STT of claim 62, wherein the controller includes a storage element operative to store one or more bitmaps used to produce the graphics layer.